TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2017-03-23-04** **Date: 05-04-2017**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to roads in U.A.S layout End Roads in ward no.07 Kodigehalli Sub Division.
Agency	:	Sri. Ninganagowda V. Patil, #57/7, Sri Krishna nilaya, 2nd Main, Ganganagara, R.T Nagara [P], Bangalore-32.
Customer's Reference	:	EE/BTP/BBMP/E-PMT/249/2015-16
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	23-03-17
Sample ID No	:	2017-03-23-04/01
Sample Type	:	Ultratech 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 (Part 1,2 3,4,5, 6,11):1988 IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4 IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5 IS 4031 Part 3, Determination of Soundness, Clause 5,Clause 6 IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5, IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5 IS 4031 Part 11,DETERMINATION OF DENSITY , Clause 6
Date of test	:	24-03-17

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	2.6	–
2	Finess by Air permeablity method (m^2/kg, Min)	287.5	225m^2/kg, Min
3	Density (gm/cc)	3.23	–
4	Standard Consistency (%)	28.5%	Not specified
5	Initial Setting time	165 minutes	Not less than 30 minutes
6	Final Setting time	275 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	1.5 mm	Not more than 10 mm

Note:
The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

Prepared by
Harshitha

Assistant Executive Engineer, Kodigehalli Division, B.B.M.P., Yelahanka, Bangalore. AE(KJ)

CIVIL PRO Sig..... Date..... BANGALORE

FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

Page 1/1
****End of Report****

CIVIL PRO
AN ISO 9001 : 2008 COMPANY &NABL ACCREDITED LABORATORY AS PER ISO/IEC 17025:2005
4, 7TH MAIN MALLESWARAM, BANGALORE -3
Certificate No.: T- 4358

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2017-04-03-07** **Date: 21-04-2017**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to roads in U.A.S layout End Roads in ward no.07 Kodigehalli Sub Division.
Agency	:	Sri. Ninganagowda V. Patil, #57/7, Sri Krishna nilaya, 2nd Main, Ganganagara, R.T Nagara [P], Bangalore-32.
Customer's Reference	:	EE/BTP/BBMP/E-PMT/249/2015-16
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	23-03-17
Sample ID No	:	2017-03-23-04/01
Sample Type	:	Ultratech 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 6, Determination of Compressive Strength, Clause 6
Date of test	:	24-03-17

Compressive Strength

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	3 Days	28.0N/mm^2	Not less than 27 N/mm^2
2	7 Days	38.0N/mm^2	Not less than 37 N/mm^2
3	28 Days	54.5N/mm^2	Not less than 53 N/mm^2

Note:
The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

Prepared by
Harshitha

Assistant Executive Engineer
Kodigehalli Sub Division,
Yelahanka Zone, B.B.M.P
Bangalore.

FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

CIVIL Pro Sig..... Date..... BANGALORE

****End of Report****

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL |
GEO TECHNICAL | PROJECT MANAGEMENT | SURVEYING SERVICES |

TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2017-03-23-04** **Date: 26-03-2017**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP,
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to roads in U.A.S layout End Roads in ward no.07 Kodigehalli Sub Division.
Agency	:	Sri. Ninganagowda V. Patil, #57/7, Sri Krishna nilaya, 2nd Main, Ganganagara, R.T Nagara [P], Bangalore-32.
Customer Reference	:	EE/BTP/BBMP/E-PMT/249/2015-16
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	23-03-17
Sample ID No	:	2017-03-23-04/02(b)
Sample Type/ Size	:	20mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	23-03-17

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	428	428	8.56	91.44	90-100
3	10 mm	2253	2681	53.62	46.38	25-55
4	4.75 mm	1861	4542	90.84	9.16	0-10
5	Pan	458	5000	100	0	–

Assistant Executive Engineer, Kodigehalli Sub Division, Yelahanka, B.B.M.P., Bangalore-N.D
AE(L-1)

CIVIL Pro Sig..... Date..... BANGALORE

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2017-03-23-04** **Date: 26-03-2017**

Sample ID No : 2017-03-23-04/02(b)

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	12.3	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	11.4	
3	Specific Gravity	2.57	_
4	Bulk Density(Loose) (Kg/l)	1.53	_
5	Bulk Density(Compacted) (Kg/l)	1.58	_
6	Water Absorption(%)	0.23	_
7	Aggregate crushing Value(%)	23.7	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	22.4	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

Note:
The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

Prepared by
Harshitha

FOR CIVIL Pro.
R KARTHIK RECHAN
Authorized Signature
Quality Manager

CIVIL Pro Sig..... Date..... BANGALORE

Page 2/2
End of Report

Assistant Executive Engineer, Kodigehalli Sub Division, Yelahanka Zone, B.B.M.P. Bangalore

TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2017-03-23-04** **Date: 26-03-2017**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP,
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to roads in U.A.S layout End Roads in ward no.07 Kodigehalli Sub Division.
Agency	:	Sri. Ninganagowda V. Patil, #57/7, Sri Krishna nilaya, 2nd Main, Ganganagara, R.T Nagara [P], Bangalore-32.
Customer's Reference	:	EE/BTP/BBMP/E-PMT/249/2015-16
Source of Sample	:	Sample supplied by Agency
Sample condition	:	Satisfactory
Date of Receipt	:	23-03-17
Sample ID No	:	2017-03-23-04/02(a)
Sample Type	:	40mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	23-03-17

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : 15000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	1023	1023	6.8	93.2	90-100
3	20 mm	4639	5662	37.7	62.3	30-70
4	10 mm	6082	11744	78.3	21.7	10-35
5	4.75 mm	2832	14576	97.2	2.8	0-5
6	Pan	424	15000	100.0	0	---

AE(HQ)

Assistant Executive Engineer, Kodigehalli Sub Division, B.B.M.P. Yelahanka, Bangalore.

CIVIL Pro Sig..... Date..... BANGALORE

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2017-03-23-04** **Date: 26-03-2017**

Sample ID No : 2017-03-23-04/02(a)

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	10.3	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	12.5	
3	Specific Gravity	2.63	–
4	Bulk Density(Loose) (Kg/l)	1.47	–
5	Bulk Density(Compacted) (Kg/l)	1.52	–
6	Water Absorption(%)	0.19	–

Note:

The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

Prepared by
Harshitha

Assistant Executive Engineer.
Kodigehalli Sub Division,
Yelahanka Zone, B.B.M.P.
Bangalore.
AE(W7)

CIVIL Pro Sig..... Date..... BANGALORE

FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

TEST REPORT OF FINE AGGREGATE

Lab ID	:	**CP-2017-03-23-04** **Date: 25-03-17**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to roads in U.A.S layout End Roads in ward no.07 Kodigehalli Sub Division.
Agency	:	Sri. Ninganagowda V. Patil, #57/7, Sri Krishna nilaya, 2nd Main, Ganganagara, R.T Nagara [P], Bangalore-32.
Customer's Reference	:	EE/BTP/BBMP/E-PMT/249/2015-16
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	23-03-17
Sample ID No	:	2017-03-23-04/03
Sample Type	:	Fine Aggregate
Reference to BIS codes	:	IS 383 : 2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1, 3) RA2012 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption
Date of test	:	23-03-17
Total weight taken	:	1000 grams

Assistant Executive Engineer, Kodigehalli Sub Division, Yelahanka Z., B.B.M.P., Bangalore.

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
1	10 mm	0	0	0	100	100	100	100	100
2	4.75 mm	34	34	3.4	96.6	90-100	90-100	90-100	95-100
3	2.36 mm	176	210	21	79	60-95	75-100	85-100	95-100
4	1.18 mm	191	401	40.1	59.9	30-70	55-90	75-100	90-100
5	600 micron	221	622	62.2	37.8	15-34	35-59	60-79	80-100
6	300 micron	240	862	86.2	13.8	5-20	8-30	12-40	15-50
7	150 micron	82	944	94.4	5.6	0-10	0-10	0-10	0-15
8	Pan	36	980	98	2	---	---	---	---

Result :The tested Sample Conforms to Grading Zone II

CIVIL Pro Sig..... Date..... BANGALORE

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL | GEO TECHNICAL | PROJECT MANAGEMENT | SURVEYING SERVICES |

TEST REPORT OF FINE AGGREGATE

Lab ID : **CP-2017-03-23-04** **Date: 25-03-17**

Sample ID No : 2017-03-23-04/03

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	1.84	–
2	Specific Gravity	2.56	–
3	Material finer than 75 micron(%)	4.90	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

Note:
The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

Asst Executive Engineer
Kodigehalli Sub Division,
Yelahanka Zone, B.B.M.P.,
Bangalore.

Prepared by
Harshitha

AE (WZ)

FOR CIVIL Pro.

CIVIL Pro Sig..... Date..... BANGALORE

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

TEST REPORT OF AGGEGRATE IMPACT VALUE
IS: 2386 Part IV

Lab ID	:	**CP-RW-2017-04-10-06** **Date: 11-04-17**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to roads in U.A.S layout End Roads in ward no.07 Kodigehalli Sub Division.
Agency	:	Sri. Ninganagowda V. Patil, #57/7, Sri Krishna nilaya, 2nd Main, Ganganagara, R.T Nagara [P], Bangalore-32.
Customer Reference	:	EE/BTP/BBMP/E-PMT/249/2015-16
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	10-04-17
Sample ID No	:	2017-04-10-06/02
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)
Date of test	:	11-04-17

Sl.No	Particulars of observations	Index	TEST 1	TEST 2
1	Total weight of the surface dry sample sample (passing 12.5 mm and retained on 10mm sieve)	A	305.2	305.5
2	Weight of fraction passing 2.36mm sieve After giving 15 blows	B	67.5	68.4
3	weight of fraction retained 2.36mm sieve After giving 15 blows	C	237.4	236.7
4	Total weight of (B+C) is less than the initial weight (Weight A) by more than one gram the result shall be discarded and a fresh test made.	A-(B+C)	0.3	0.4
5	Aggregate impact value	(B/A)*100	22.1	22.4
6	Aggregate impact value (Mean of two tests)	Pecentage	22.2	

Note:-

The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

Prepared By:
Harshitha

AE(WW)

Page 1/1
End of Report

CIVIL PRO Sig..... Date..... BANGALORE

FOR CIVIL Pro.
R KARTHIK RECHAN
Authorized Signatory
Quality Manager

TEST RESULTS OF GRADATION FOR WMM

Lab ID	:	**CP-RW-2017-04-10-06** **Date: 11-04-17**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to roads in U.A.S layout End Roads in ward no.07 Kodigehalli Sub Division.
Agency	:	Sri. Ninganagowda V. Patil, #57/7, Sri Krishna nilaya, 2nd Main, Ganganagara, R.T Nagara [P], Bangalore-32.
Customer Reference	:	EE/BTP/BBMP/E-PMT/249/2015-16
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	10-04-17
Sample ID No	:	2017-04-10-06/01
Type of Mix	:	WMM (Wet Mix Macadam)
Date of test	:	10-04-17
Oven Dry Weight	:	12000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0	100	100
45	213	213	1.8	98.2	95-100
22.4	2859	3072	25.6	74.4	60-80
11.2	2639	5711	47.6	52.4	40-60
4.75	2734	8445	70.4	29.6	25-40
2.36	1610	10055	83.8	16.2	15-30
0.6	247	10302	85.9	14.2	8-22
0.075	988	11290	94.1	5.9	0-5

Note:-

The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

Prepared By:
Harshitha

CIVIL PRO Sig..... Date..... BANGALORE

FOR CIVIL Pro.
R KARTHIK RECHAN
Authorized Signatory
Quality Manager

End of Report

TEST RESULTS OF BITUMEN CONTENT FOR SDBC
(AS per IRC:SP:-11-1984)

Lab ID	:	**CP-RW-2017-04-18-03**	**Date: 19-04-17**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.	
Address	:	Kodigehalli sub division, BBMP, Bangalore.	
Project Name	:	Improvements to roads in U.A.S layout End Roads in ward no.07 Kodigehalli Sub Division.	
Agency	:	Sri. Ninganagowda V. Patil, #57/7, Sri Krishna nilaya, 2nd Main, Ganganagara, R.T Nagara [P], Bangalore-32.	
Customer Reference	:	EE/BTP/BBMP/E-PMT/249/2015-16	
Source of Sample	:	Sample supplied by Agency	
Sample Condition	:	Satisfactory	
Date of Receipt	:	18-04-17	
Sample ID No	:	2017-04-18-03-01	
Type of Mix	:	SDBC (Semi Dense Bituminous Concrete)	
Date of test	:	18-04-17	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	A	500	501
2	Weight of the sample After extraction	B	476	478
3	Bitumen percentage	$\frac{A-B}{A}$ X 100	4.80	4.59
4	Average percentage	%	4.70	

Assistant Executive Engineer,
Kodigehalli Sub Division,
Yelahanka Zone, B.B.M.P.,
Bangalore.

Prepared By:
Harshitha

FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signature
Quality Manager

CIVIL Pro Sig..... Date..... BANGALORE

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL |
GEO TECHNICAL | PROJECT MANAGEMENT | SURVEYING SERVICES |

Lab ID : **CP-RW-2017-04-18-03** **Date: 19-04-17**

AFTER EXTRACTION (Trail-1)

Oven Dry Weight(gm) : 476

IS Sieve Size(mm)	Weight Retained(gm)	Comulative Weight Retained (gm)	Comulative % of Passing	Secified limits as per MORTH specification table 500-15(grading-2)
13.2	0	0	100.0	100
9.5	30	30	93.7	90-100
4.75	212	242	49.2	35-51
2.36	63	305	35.9	24-39
1.18	39	344	27.7	15-30
0.3	71	415	12.8	9-19
0.075	34	449	5.7	3-8
PAN	27	476	0.0	0

AFTER EXTRACTION (Trail-2)

Oven Dry Weight(gm) : 478

IS Sieve Size(mm)	Weight Retained(gm)	Comulative Weight Retained (gm)	Comulative % of Passing	Secified limits as per MORTH specification table 500-15(grading-2)
13.2	0	0	100.0	100
9.5	29	29	93.9	90-100
4.75	215	244	49.0	35-51
2.36	62	306	36.0	24-39
1.18	41	347	27.4	15-30
0.3	66	413	13.6	9-19
0.075	32	445	6.9	3-8
PAN	33	478	0.0	0

Note:-
The results pertain to the samples received and tested.
All Information Furnished by the customer/Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

Assistant Executive Engineer
Kodigehalli Sub Division
Yelahanka Zone
Bangalore.

Prepared By:
Harshitha

FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signature
Quality Manager

CIVIL PRO BANGALORE Sig..... Date.....

End of Report

CIVIL PRO
AN ISO 9001 : 2008 COMPANY &NABL ACCREDITED LABORATORY AS PER ISO/IEC 17025:2005
4, 7TH MAIN MALLESWARAM, BANGALORE -3

TEST RESULTS OF STEEL

Lab ID	:	**CP-2017-04-02-02**	**Date: 05-04-17**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.	
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.	
Project Name	:	Improvements to roads in U.A.S layout End Roads in ward no.07 Kodigehalli Sub Division.	
Agency	:	Sri. Ninganagowda V. Patil, #57/7, Sri Krishna nilaya, 2nd Main, Ganganagara, R.T Nagara [P], Bangalore-32.	
Customer's Reference	:	EE/BTP/BBMP/E-PMT/249/2015-16	
Source of Sample	:	Sample supplied by Agency	
Sample Condition	:	Satisfactory	
Date of Receipt	:	02-04-17	
Sample ID No	:	2017-04-02-02/01	
Sample Type	:	JSW	
Reference to BIS codes	:	IS 1786-2008, IS:1608-2005(RA 2011), IS 1599-2012.	
Date of test:	:	03-04-17	

Sl.No	Identification of sample	Grade of the sample	Diameter of the steel bar	Weight of the sample	Yield stress	Tensile strength	Elongation	Bend test	Rebend test
			(mm)	(kg/m)	(N/mm2)	(N/mm2)	(%)		
1	JSW	Fe500	8	0.392	544	675	21.0%	Satisfactory	Satisfactory
2	JSW	Fe500	10	0.615	566	681	20.0%	Satisfactory	Satisfactory
3	JSW	Fe500	12	0.888	586	691	19.0%	Satisfactory	Satisfactory

Assistant Executive Engineer, Kodigehalli Sub Division, Yelahanka, B.B.M.P.

Note:
The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

Prepared By:
Harshitha

AE(HQ)

CIVIL PRO Sig..... Date..... BANGALORE

Page 1/1
End of Report

DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE (IS 2386 (Part 1) 1963 (RA 2011)

Lab ID	:	**CP-RW-2017-04-18-03** **Date: 19-04-17**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to roads in U.A.S layout End Roads in ward no.07 Kodigehalli Sub Division.
Agency	:	Sri. Ninganagowda V. Patil, #57/7, Sri Krishna nilaya, 2nd Main, Ganganagara, R.T Nagara [P], Bangalore-32.
Customer Reference	:	EE/BTP/BBMP/E-PMT/249/2015-16
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	18-04-17
Sample ID No	:	2017-04-18-03-01
Type of Mix	:	Coarse Aggregate for SDBC (Semi Dense Bituminous Concrete)
Date of test	:	18-04-17

Result

Flakiness Index	14.5%
Elongation Index	11.2%
Combined Flakiness & Elongation Index for SDBC	25.7%

Comments:

Maximum allowable Flakiness & Elongation Index For SDBC is 30 %

Assistant Executive Engineer, Kodigehalli Sub Division, Yelahanka, B.B.M.P., Bangalore.

Note:-

The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

FOR CIVIL Pro.

CIVIL PRO Sig..... Date..... BANGALORE

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

Prepared By:
Harshitha

AE(HW)

End of Report

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL |
GEO TECHNICAL | PROJECT MANAGEMENT | SURVEYING SERVICES |

SPECIFIC GRAVITY AND WATER ABSORPTION TEST
IS:2386 (Part III)

Lab ID	:	**CP-RW-2017-04-18-03** **Date: 20-04-17**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Agency	:	Improvements to roads in U.A.S layout End Roads in ward no.07 Kodigehalli Sub Division.
Project Name	:	Sri. Ninganagowda V. Patil, #57/7, Sri Krishna nilaya, 2nd Main, Ganganagara, R.T Nagara [P], Bangalore-32.
Customer Reference	:	EE/BTP/BBMP/E-PMT/249/2015-16
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	18-04-17
Sample ID No	:	2017-04-18-03-01
Type of Mix	:	Coarse Aggregate for SDBC (Semi Dense Bituminous concrete)
Date of test	:	19-04-17

Sl.No	Details of Observations	Index	Unit	Test 1	Test 2	Mean Value
1	Weight of Wet aggregates + Basket suspended in water	A1	grams	2293	2258	
2	Weight of Empty Basket suspended in water	A2	grams	791	791	
3	Weight of Aggregates in water	A=A1-A2	grams	1502	1467	
4	Weight of Saturated Surface Dry aggregate	B	grams	2430	2350	
5	Weight of oven dried aggregate	C	grams	2422	2342	
6	Specific gravity	C/(B-A)		2.61	2.65	2.63
7	Apparent Specific gravity	C/(C-A)		2.63	2.68	2.65
8	Water absorption	100*(B-C) /C	Percent	0.33	0.34	0.34

Note:-
The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

Assistant Executive Engineer, Kodigehalli Sub Division, Yelahanka Zone, BBMP, Bangalore.

FOR CIVIL Pro.

Prepared By:
Harshitha

R KARTHIK RECHAN
Authorized Signature
Quality Manager

AE(W7)

Page 1/1
End of Report

TESTS RESULTS ON AGGREGATE IMPACT VALUE
(IS:2386 Part IV)

Lab ID	:	**CP-RW-2017-04-18-03**	**Date: 19-04-17**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.	
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.	
Project Name	:	Improvements to roads in U.A.S layout End Roads in ward no.07 Kodigehalli Sub Division.	
Agency	:	Sri. Ninganagowda V. Patil, #57/7, Sri Krishna nilaya, 2nd Main, Ganganagara, R.T Nagara [P], Bangalore-32.	
Customer Reference	:	EE/BTP/BBMP/E-PMT/249/2015-16	
Source of Sample	:	Sample supplied by Agency	
Sample Condition	:	Satisfactory	
Date of Receipt	:	18-04-17	
Sample ID No	:	2017-04-18-03-01	
Type of Mix	:	Coarse Aggregate for SDBC (Semi Dense Bituminous Concrete)	
Date of test	:	18-04-17	

Sl.No	Particulars of observations	Index	TEST 1	TEST 2
1	Total weight of the surface dry sample sample (passing 12.5 mm and retained on 10mm sieve)	A	360	360
2	Weight of fraction passing 2.36mm sieve After giving 15 blows	B	75.6	73.5
3	weight of fraction retained 2.36mm sieve After giving 15 blows	C	283.9	285.9
4	Total weight of (B+C) is less than the initial weight (Weight A) by more than one gram the result shall be discarded and a fresh test made.	A-(B+C)	0.5	0.6
5	Aggregate impct value	(B/A)*100	21.00	20.42
6	Aggregate impct value (Mean of two tests)		20.71	

Assistant Executive Engineer. Kodigehalli Division. Yelahanka - B.B.M.P.. Bangalore.

Note:
The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

Prepared By:
Harshitha

FOR CIVIL Pro.
R KARTHIK RECHAN
Authorized Signatory
Quality Manager

CIVIL Pro Sig..... Date..... BANGALORE

Page 1/1
End of Report

TESTS RESULTS ON STABILITY OF MIX

Lab ID	:	**CP-RW-2017-04-18-03** **Date: 20-04-17**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to roads in U.A.S layout End Roads in ward no.07 Kodigehalli Sub Division.
Agency	:	Sri. Ninganagowda V. Patil, #57/7, Sri Krishna nilaya, 2nd Main, Ganganagara, R.T Nagara [P], Bangalore-32.
Customer Reference	:	EE/BTP/BBMP/E-PMT/249/2015-16
Source of Sample	:	Hot Mix Plant, Bangalore
Sample Condition	:	Satisfactory
Date of Receipt	:	18-04-17
Sample ID No	:	2017-04-18-03-01
Type of Mix	:	SDBC (Semi Dense Bituminous Concrete)
Date of test	:	19-04-17

The results of the tests conducted on the Semi Dense Bituminous Concrete mix sample are as follow

Sl.No	Particulars of observations	TEST 1	TEST 2	Secified limits as per MORTH specification table 500-16
1	Marshal Stability at 60°C, KN	11.54	11.31	8.2KN(min)
2	Marshal flow at 60°C, mm	3.1	3.2	2-4
3	Percent air Voids	4.39	4.45	3-5
4	Percent Voids in mineral Aggregate(VMA %)	13.98	14.04	13-15
5	Percent Voids filled with Bitumen(VFB %)	72.32	71.96	65-75
6	Density, g/cc	2.3	2.44	–

Assistant Executive Engineer, Kodigehalli Sub Division, Yelahanka Zone, B.B.M.P., Bangalore.

Note:-
The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

Prepared By:
Harshitha

AE(CP)

CIVIL Pro Sig..... Date..... BANGALORE

FOR CIVIL Pro.
R KARTHIK RECHAN
Authorized Signatory
Quality Manager

End of Report

CIVIL PRO
AN ISO 9001 : 2008 COMPANY &NABL ACCREDITED LABORATORY AS PER ISO/IEC 17025:2005
4, 7TH MAIN MALLESWARAM, BANGALORE -3

TEST RESULTS OF GRADATION FOR SDBC
IS 2386 (Part 1) 1963 (RA 2007)

Lab ID	:	**CP-RW-2017-04-18-03** **Date: 20-04-17**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP,
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to roads in U.A.S layout End Roads in ward no.07 Kodigehalli Sub Division.
Agency	:	Sri. Ninganagowda V. Patil, #57/7, Sri Krishna nilaya, 2nd Main, Ganganagara, R.T Nagara [P], Bangalore-32.
Customer Reference	:	EE/BTP/BBMP/E-PMT/249/2015-16
Source of Sample	:	Sample supplied by the Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	18-04-17
Sample ID No	:	2017-04-18-03-01
Type of Mix	:	SDBC-Plant (Semi Dense Bituminous Concrete)
Date of test	:	19-04-17
Oven Dry Weight(gm)	:	5000

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-15(grading-2)
13.2	0	0	0	100	100
9.5	405	405	8.10	91.90	90-100
4.75	2192	2597	51.94	48.06	35-51
2.36	1030	3627	72.54	27.46	24-39
1.18	533	4160	83.20	16.80	15-30
0.3	360	4520	90.40	9.60	9-19
0.075	212	4732	94.64	5.36	3-8
PAN	268	5000	100.00	0.00	0

Note:-
The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

Assistant Executive Engineer,
Kodigehalli Sub Division,
Yelahanka Zone, B.M.P.
Bangalore.

FOR CIVIL Pro
R KARTHIK RECHAN
Authorized Signatory
Quality Manager

CIVIL Pro Sig..... Date..... BANGALORE

Prepared By:
Harshitha

AE(W7)

Page 1/1
End of Report

CIVIL PRO
AN ISO 9001 : 2008 COMPANY &NABL ACCREDITED LABORATORY AS PER ISO/IEC 17025:2005
4, 7TH MAIN MALLESWARAM, BANGALORE -3

TEST REPORT OF AGGEGRATE STRIPPING VALUE OF ROAD AGGRGATE (IS:6241)

Lab ID	:	**CP-RW-2017-04-18-03** **Date: 20-04-17**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to roads in U.A.S layout End Roads in ward no.07 Kodigehalli Sub Division.
Agency	:	Sri. Ninganagowda V. Patil, #57/7, Sri Krishna nilaya, 2nd Main, Ganganagara, R.T Nagara [P], Bangalore-32.
Customer Reference	:	EE/BTP/BBMP/E-PMT/249/2015-16
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	18-04-17
Sample ID No	:	2017-04-18-03-01
Type of Mix	:	SDBC (Semi Dense Bituminous Concrete)
Date of test	:	19-04-17

Type of Binder	:	60/70
% of Binder Used	:	5.0%
Weight of Aggregate	:	200.0 gm
Weight of Binder	:	10.0 gm
Temperature of water bath	:	40°C

No of test	Retained Stripping Percentage	Stripping Percentage	Average Retained Stripping Percentage	Secified limits as per MORTH specification table 500-8
1	97.5	2.5	98.3	Minimum Retained Coating 95%
2	98.5	1.5		
3	99.0	1.0		

Note:
The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

Assistant Executive Engineer, Kodigehalli Sub Division, Yelahanka, Bangalore, BMP

Prepared by
Harshitha

AE (W7)

FOR CIVIL Pro.

CIVIL Pro Sig..... Date..... BANGALORE

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL |
GEO TECHNICAL | PROJECT MANAGEMENT | SURVEYING SERVICES |

TEST REPORT ON BITUMEN

Lab ID	:	**CP-2017-04-05-07** **Date: 07-04-17**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to roads in U.A.S layout End Roads in ward no.07 Kodigehalli Sub Division.
Agency	:	Sri. Ninganagowda V. Patil, #57/7, Sri Krishna nilaya, 2nd Main, Ganganagara, R.T Nagara [P], Bangalore-32.
Customer's Reference	:	EE/BTP/BBMP/E-PMT/249/2015-16
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	05-04-17
Sample ID No	:	2017-04-05-07/01
Sample Type	:	Bitumen
Reference to BIS codes	:	IS: 1201-1220(1978) (Reaffirmed-2004)
Date of test	:	06-04-17

Test Results

Sl.no	Name of Test	Result	Requirements as per IS:73-2013
1	Penetration at 25°C , in 1/10th mm	88	80 to 100
2	Softening Point, °C	49	Min. 40°C
3	Ductility, cm	89	Min. 75cm
4	Flash point, °C	226	Min. 220°C
	Fire point, °C	235	

Note:
The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

Assistant Executive Engineer
Kodigehalli Sub Division
Yelahanka
Bangalore.
B.B.M.P

Prepared by
Harshitha

FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

CIVIL Pro Sig..... Date..... BANGALORE

Page 1/1
****End of Report****

DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Lab ID	:	**CP-RW-2017-04-10-06**	**Date: 11-04-17**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.	
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.	
Project Name	:	Improvements to roads in U.A.S layout End Roads in ward no.07 Kodigehalli Sub Division.	
Agency	:	Sri. Ninganagowda V. Patil, #57/7, Sri Krishna nilaya, 2nd Main, Ganganagara, R.T Nagara [P], Bangalore-32.	
Customer Reference	:	EE/BTP/BBMP/E-PMT/249/2015-16	
Source of Sample	:	Sample supplied by Agency	
Sample Condition	:	Satisfactory	
Date of Receipt	:	10-04-17	
Sample ID No	:	2017-04-10-06/03	
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)	
Date of test	:	11-04-17	

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	13.5%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	11.6%	
Combined Flakiness and Elongation Index for WMM	25.1%	

Note:-
The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid.
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

Assistant Executive Engineer.
Kodigehalli Sub Division.
Yelahanka Zone, B.B.M.P.
Bangalore.

FOR CIVIL Pro.

CIVIL Pro Sig..... Date..... BANGALORE

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

Prepared By:
Harshitha

AE(LT)

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

TEST REPORT OF CEMENT CONCRETE CUBES

Date: 17-04-17

Lab ID	:	**CP-2017-04-15-04**
Customer	:	Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Address	:	Kodigehalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to roads in U.A.S layout End Roads in ward no.07 Kodigehalli Sub Division.
Agency	:	Sri. Ninganagowda V. Patil, #57/7, Sri Krishna nilaya, 2nd Main, Ganganagara, R.T Nagara [P], Bangalore-32.
Customer's Reference	:	EE/BTP/BBMP/E-PMT/249/2015-16
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	15-04-17
Sample ID No	:	2017-04-15-04/01
Customer ID	:	Drain Concrete
Sample Type /Size	:	150X150X150 mm
Sample grade/Age	:	M20 / 7 Days Compressive Strength
Reference to BIS codes	:	IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5
Date of test	:	17/04/2017

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Concrete	M20	10/04/2017	17/04/2017	150.72 X 150.57 X 150.35	22694	8.329	394.9	17.4	17.6
2	Drain Concrete	M20	10/04/2017	17/04/2017	151.68 X 150.71 X 150.39	22860	8.292	393.2	17.2	
3	Drain Concrete	M20	10/04/2017	17/04/2017	150.95 X 150.28 X 150.36	22685	8.284	412.9	18.2	

Note:
The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

Prepared by
Harsitha

FOR CIVIL Pro.

CIVIL Pro Sig..... Date..... BANGALORE

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

CIVIL PRO
AN ISO 9001 : 2008 COMPANY &NABL ACCREDITED LABORATORY AS PER ISO/IEC 17025:2005
4, 7TH MAIN MALLESWARAM, BANGALORE -3
Certificate No.: T- 4358

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2017-04-15-04** **Date: 08-05-17**

Customer : Assistant Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.

Address : Kodigehalli Sub Division, BBMP, Bangalore.

Project Name : Improvements to roads in U.A.S layout End Roads in ward no.07 Kodigehalli Sub Division.

Agency : Sri. Ninganagowda V. Patil, #57/7, Sri Krishna nilaya, 2nd Main, Ganganagara, R.T Nagara [P], Bangalore-32.

Customer's Reference : EE/BTP/BBMP/E-PMT/249/2015-16

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 15-04-17

Sample ID No : 2017-04-15-04/02

Customer ID : Drain Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 08/05/2017

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Concrete	M20	10/04/2017	08/05/2017	150.67 X 151.52 X 150.32	22830	8.309	520.5	22.8	22.9
2	Drain Concrete	M20	10/04/2017	08/05/2017	150.77 X 150.93 X 150.29	22756	8.280	530.2	23.3	
3	Drain Concrete	M20	10/04/2017	08/05/2017	150.73 X 150.46 X 150.83	22679	8.297	512.5	22.6	

Note:
The results pertain to the samples received and tested.
All information furnished by Customer/Representative
Any correction in the report will make this report invalid
This report without prior written approval should not be reproduced or published in full or part.
Samples will be disposed after 30 days from the date of issue of test certificate

Prepared by
Harsitha

FOR CIVIL Pro.

CIVIL Pro Sig..... Date..... BANGALORE

R.KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL |
GEO TECHNICAL | PROJECT MANAGEMENT | SURVEYING SERVICES |